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TITLE: Method for selective inactivation of viral replication

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US-CL-CURRENT: 435/5; 435/325, 435/455, 435/6, 435/7.1, 514/44,
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CLAIMS:

What is claimed is:

1. A method of inhibiting viral replication in a host eukaryotic cell in vitro, where the virus produces a viral inhibitor which interferes with the activation of the host-cell interferon-induced, double-stranded RNA-activated protein kinase, comprising the steps of:

administering to the cells, an agent able to block the effect of the viral inhibitor in interfering with the activation of the protein kinase under conditions sufficient for the agent to block the effect of the viral inhibitor so that protein kinase can be activated.

2. The method of claim 1, wherein the virus produces a RNA viral inhibitor able to block binding of double-stranded RNA to the protein kinase, and the agent administered is able to block the binding of the viral inhibitor to the protein kinase.

3. The method of claim 1, wherein the agent is selected by the steps of:

incubating a mixture containing the protein kinase, viral inhibitor, and agent to be selected under conditions effective to bind the protein kinase to the viral inhibitor, in the absence of the agent, and

examining the mixture for the presence of binding of the protein kinase to the viral inhibitor, to determine whether the presence of the agent has inhibited binding of the protein kinase to the viral inhibitor.

4. The method of claim 1, wherein the agent is selected by the steps of:

incubating a mixture containing the protein kinase, the viral inhibitor, and agent to be tested, under conditions effective to activate the protein kinase in the absence of the viral inhibitor, and

examining the mixture for the presence of protein kinase activity.

5. A method for inhibiting the activity of a viral nucleic acid product wherein said viral nucleic acid product is VAI which inhibits the function of a cellular component which regulates translation comprising the step of administering a nucleic acid fragment complementary to at least a portion of said VAI under conditions sufficient to allowing binding of the fragment to at least a portion of VAI so that the functional activity of VAI is inhibited.

6. A method for inhibiting the activity of a viral nucleic acid product wherein said nucleic acid product inhibits the function of a cellular component which regulates translation comprising the step of administering a nucleic acid fragment complementary to at least a portion of said viral nucleic acid product wherein said nucleic acid fragment is ava 1 under conditions sufficient to allow binding of ava 1 to a portion of said viral nucleic acid product so that the functional activity of the viral nucleic acid products is inhibited.

7. A method for inhibiting the activity of a viral nucleic acid product wherein said nucleic acid product inhibits the function of a cellular component which regulates translation comprising the step of administering a nucleic acid fragment complementary to at least a portion of said viral nucleic acid product wherein said nucleic acid fragment is either ava 9 or ava 15 under conditions sufficient to allow binding of either ava 9 or ava 15 to a portion of said viral nucleic acid product so that the functional activity of the viral nucleic acid product is inhibited.